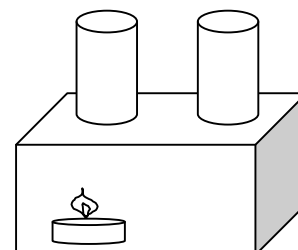


### Review for Unit Test #3: Fire Emergencies

1. What are the four components of the fire tetrahedron?
2. What are the four main factors that affect the rate of a chemical reaction?
3. Heat is both a requirement for, and a product of, fire. Explain.
4. What are the five types of energy that can be used to ignite a fire? Give an example for each.

Type of Energy	Example

5. Explain how oily rags or a big pile of wood chips can “spontaneously” ignite.
6. What causes many fires at gas stations? Why is this more common in women than in men?
7. Put a check-mark beside the substances which are oxidizing agents:  
 bromine     potassium chloride     oxygen gas     zinc phosphite  
 propane     hydrogen peroxide     magnesium chlorate     acetylene
8. How can you recognize many oxidizing agents from their names? \_\_\_\_\_
9. The chemical name for bleach is sodium hypochlorite. Is bleach an oxidizing agent? \_\_\_\_\_
10. Give two examples of places where the air may be oxygen enriched.
11. What characteristics are used to distinguish between superficial (first degree), partial thickness (second degree) and full thickness (third degree) burns?
12. Explain the difference between complete and incomplete combustion. What causes incomplete combustion? What do you see when combustion is incomplete?
13. List two toxic (poisonous) gases that are produced by incomplete combustion.
14. List three powders or dusts that are frequent causes of explosions.
15. Draw in the direction that you saw the smoke move during the smoke chimney experiment. Clearly explain WHY the smoke moved in this way.
16. Understand the three methods of heat transfer and give an example of each in a fire situation. Which method of heat transfer is most important in fire development?



17. Describe the five stages of fire development in compartment fire. What is significant or important at each stage?
  
18. Describe the conditions that lead to backdraft. What triggers a backdraft?
  
19. How is pyrolysis different from vapourization? How are they the same?
  
20. What is meant by “explosive range”?
  
21. What are three ways that people can be trapped or killed due to truss construction in a building?
  
22. How can you tell if a building is balloon construction or platform construction by how the fire spreads?
  
23. Why do trussed roofs fail so quickly?
  
24. Know the type of material that is burning in these classes of fires:

<b>Class of Fire</b>	<b>Nature of the Fuel that is Burning</b>
<b>Class A</b>	
<b>Class B</b>	
<b>Class C</b>	
<b>Class D</b>	
<b>Class K</b>	

25. What are the danger(s) associated with each of the following types of construction?

<b>Type of Construction</b>	<b>Danger(s) associated with this type of construction</b>
<b>Balloon construction</b>	(1)
<b>Truss construction</b>	(3)
<b>Steel I beams</b>	(3)
<b>Engineered I beams</b>	(1)

26. A compressed water fire extinguisher should not be used on a Class \_\_\_\_ or Class \_\_\_\_ fire.
27. A carbon dioxide fire extinguisher is not effective on a Class \_\_\_\_ fire.
28. What type of substance is used to extinguish a fire in valuable fuels such as art or important paper records? \_\_\_\_\_

29. What are the four steps to follow when using a portable fire extinguisher?
30. What are four situations in which you should NOT use a fire extinguisher?
31. What are four fire or explosion hazards that may be found in modern cars?
32. What are three specific things firefighters SHOULD do when fighting a vehicle fire?
33. What are three specific things firefighters should NOT do when fighting a vehicle fire?
34. This picture shows a gasoline spill on pavement. Give two (2) reasons why the flames are found well above the liquid gasoline.

